

UNITED STATES DISTRICT COURT
DISTRICT OF OREGON
EUGENE DIVISION

ADASA INC.,

Plaintiff,

v.

AVERY DENNISON CORPORATION,

Defendant.

Case No.: 6:17-cv-01685-MK

OPINION AND ORDER¹

RE: PLAINTIFF’S MOTION FOR
SUMMARY JUDGMENT;
DEFENDANT’S MOTION FOR
SUMMARY JUDGMENT OF
NON-INFRINGEMENT AND
ALTERNATIVE MOTION FOR
JUDGMENT OF INVALIDITY UNDER
35 U.S.C. § 103 AND 35 U.S.C. § 101

KASUBHAI, Magistrate Judge:

Plaintiff brought this action alleging that Defendant infringed its patent in violation of 35 U.S.C. §§ 271(a), (b), (c), and (f). Second Am. Compl., ECF No. 112. Before the Court are: (1) Plaintiff’s Motion for Summary Judgment (ECF No. 168) (2) Defendant’s Motion for Summary Judgment of Non-Infringement and Alternative Motion for Judgment of Invalidity Under 35 U.S.C. §§ 101 and 103 (ECF No. 169), and (3) Defendant’s Motion for Leave to File Sur-Reply (ECF No. 186).

¹ The parties consent to jurisdiction by a U.S. Magistrate Judge. ECF No. 29.

The Court heard oral argument on July 8, 2020. ECF No. 194. In order to allow the parties to prepare for the jury trial scheduled in September 2020, the Court issued a letter on July 15, 2020 with its summary rulings of the summary judgment motions and the evidentiary issues raised by the parties in the motions. The jury trial was subsequently postponed due to COVID-19. The Court now issues this Opinion and Order to formally address the pending motions. The Court rules as follows:

Both parties' evidentiary objections are OVERRULED.

Defendant's Motion to File Sur-Reply is GRANTED (ECF No. 186) is GRANTED.

Defendant's Alternative Motion for Summary Judgment of Invalidity Under 35 U.S.C. §§ 101 and 103 (ECF No. 169) is DENIED.

Plaintiff's Motion for Summary Judgment (ECF No. 168) is GRANTED except as to infringement of element F by the Commissioning Authority Schemas, which is DENIED.

Defendant's Motion for Summary Judgment of Non-Infringement (ECF No. 169) is DENIED.

BACKGROUND

I. General Background

Plaintiff, an Oregon corporation, is the owner of the United States Patent No. 9,798,967 (the " '967 Patent"). Am. Compl. Ex. A, the '967 Patent, ECF No. 71-1. The inventor of the '967 Patent is Clarke McAllister ("McAllister"). *Id.* The '967 Patent relates in part to systems for encoded and commissioned wireless radio frequency identification ("RFID") devices. Second Am. Compl. ¶ 8, ECF No. 112; Answer, ¶¶ 8, 11, ECF No. 114. In the RFID industry, and particularly for merchandise tracking applications, the memory bank of an RFID tag is encoded with an Electronic Product Code ("EPC"), which is an identifier for an item in the supply chain

to uniquely identify that particular item. Second Am. Compl. ¶ 11, ECF No. 112; Answer ¶ 11, ECF No. 114. The EPC can be serialized in a format following an EPC tag data standard. Second Am. Compl. ¶ 11, ECF No. 112; Answer ¶ 11, ECF No. 114. One standard is known as Serialized Global Trade Item Number (“SGTIN”). Second Am. Compl. ¶ 11, ECF No. 112; Answer ¶ 11, ECF No. 114.

Where the SGTIN format is used for item identification, the EPC contains “object class” information and a “serial number.” Second Am. Compl. ¶ 12, ECF No. 112; Answer ¶ 12, ECF No. 114. The “object class” information includes, among other things, a “company prefix,” which identifies the brand owner and an “item reference number.” Second Am. Compl. ¶ 12, ECF No. 112; Answer ¶ 12, ECF No. 114. The “item reference number” identifies the class of item offered by a brand owner. Second Am. Compl. ¶ 12, ECF No. 112; Answer ¶ 12, ECF No. 114. The “object class” section of SGTIN format uniquely identifies different classes of products sold by a particular brand owner. Second Am. Compl. ¶ 12, ECF No. 112; Answer ¶ 12, ECF No. 114. The companies or brand owners are responsible for assigning a unique serial number for each item of an object class. Second Am. Compl. ¶ 12, ECF No. 112; Answer ¶ 12, ECF No. 114. The combination of an object class and a unique serial number provides a unique object number contained in the EPC. Second Am. Compl. ¶ 13, ECF No. 112; Answer ¶ 13, ECF No. 114.

The ‘967 Patent teaches RFID transponder or inlay with RFID integrated circuit chip (“IC chip”) having encoded memory structure that ensures uniqueness with the serial number portion of the code. Am. Compl. Ex. A, the ‘967 Patent, ECF No. 71-1. Specifically, the ‘967 Patent teaches an RFID IC chip memory structure by delineating a section using the leading bits

of the serial number section of the EPC binary encoding – referred to as the “most significant bits” (“MSB”) in the ‘967 Patent. Am. Compl. Ex. A, the ‘967 Patent, ECF No. 71-1.

II. Previously Resolved Issues That Are Relevant

A. Priority

The ‘967 Patent claims priority through a chain of patent applications, including the U.S. Patent Application No. 12/124,768, filed on May 21, 2008 (“2008 Application”). *Id.* at 1:6-21. On Defendant’s challenge of the priority date, this Court has held that “the ‘967 Patent is entitled to the priority date of the 2008 Application.” Op. and Order 16, ECF No. 167.

B. Ad Hoc Mode

In August and September of 2008, Plaintiff and the inventor McAllister worked to incorporate embodiments of McAllister’s invention into an RFID encoding system as a project with Walmart, referred to as the “Ad Hoc Mode”. Legaard Decl., Ex. E., McAllister Dep. 95:17-24, ECF No. 123-5; *see* Ex. G, Pl.’s Resp. to Def.’s Second Set of Interrogs. 3, ECF No. 123-7. Plaintiff introduced the Ad Hoc feature commercially in February 2009 and sold the encoders and software implementing the Ad Hoc Mode to Walmart on April 20, 2009. *Id.* at Ex. G, 3-4. Based on the finding that the 2008 Application discloses the claimed invention in the ‘967 Patent, this Court held that “the later-occurred Ad Hoc Mode sale cannot create an on-sale bar to the ‘967 Patent.” Op. and Order 16, ECF No. 167.

III. Plaintiff’s Claims

Plaintiff alleges that Defendant, a third-party encoder, “makes, encodes, sells, and offers to sell RFID tags and labels for customers that are RFID transponders that comprise a substrate, an antenna, and an RFID IC chip coupled to the antenna.” Second Am. Compl. ¶ 22, ECF No.

112; *see also*, Pl.’s Mot. Summ. J., Ex. C, ¶ 22, ECF No. 168-5; Ex. D, ¶ 22, ECF No. 168-6; Ex. H, ¶ 19, ECF No. 168-11.

Plaintiff alleges direct infringement of claims 1-6, 12-15 of the ‘967 Patent by using the format of the ‘967 Patent in violation of 35 U.S.C. § 271(a). *Id.* ¶¶ 26-35, ECF No. 112. Plaintiff also alleges indirect infringement of the ‘967 Patent in violation of 35 U.S.C. §§ 271(b), (c) and (f). *Id.* ¶¶ 36-41.

IV. Motions at Issue

Plaintiff’s summary judgment motion has two parts. In the first part, Plaintiff moves for partial summary judgment on its claims of 35 U.S.C. §§ 271(a), (b) and (f). Pl.’s Mot. Summ. J., 10-24, ECF No. 168. Plaintiff also moves for summary judgment on Defendant’s affirmative defenses of invalidity and inequitable conduct.² *Id.* at 25-33. After Plaintiff filed a Reply to its summary judgment motion, Defendant filed a Motion for Leave to File Sur-Reply. Def.’s Mot. File Sur-Reply, ECF No. 186.

Defendant moves for summary judgment of non-infringement. Def.’s Mot. Summ. J. 8-11, ECF No. 169. Alternatively, Defendant moves for summary judgment of invalidity. *Id.* at 12-21.

LEGAL STANDARD

Summary judgment is appropriate when “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). “The

² Defendant raised eleven affirmative defenses in its Answer. Answer 9-12, ECF No. 11. After this Court’s previous ruling granting Plaintiff’s Motion for Judgment on the Pleadings against Defendant’s affirmative defenses three to ten, the three remaining affirmative defenses are: non-infringement, invalidity and inequitable conduct. Op. and Order 4-10, ECF No. 166. The first part of Plaintiff’s motion at issue concerns the affirmative defense of non-infringement related to 35 U.S.C. §§ 271(a), (b), (f). Pl.’s Mot. Summ. J. 8-24, ECF No. 168. The second part concerns the affirmative defenses of invalidity and inequitable conduct. *Id.* at 26-33.

movant has the burden of showing that there is no genuine issue of fact, but the plaintiff is not thereby relieved of his own burden of producing in turn evidence that would support a jury verdict.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 256 (1986). In determining a motion for summary judgment, “the judge must view the evidence in the light most favorable to the nonmoving party.” *McLaughlin v. Liu*, 849 F.2d 1205, 1208 (9th Cir. 1988).

DISCUSSION

I. Evidentiary Issues

The Court starts with the three evidentiary issues raised in the parties’ filings related to Plaintiff’s Motion for Summary Judgment. First, Plaintiff objects to Mr. Blanchard’s unsworn report and Mr. Sweeney’s unsworn chart in support of Defendant’s Response. Pl.’s Reply 7-8, ECF No. 179. For purposes of summary judgment, the Court overrules Plaintiff’s objection.

The second and third evidentiary issues are raised by Defendant. Defendant objects to Dr. Engels’ declaration in support of Plaintiff’s Reply because the declaration is new. Def.’s Sur-Reply, ECF Nos. 186, 186-1. Additionally, Defendant files a Motion for Leave to File Sur-Reply as response to Plaintiff’s submission of Dr. Engels’ “new” declaration. Def.’s Mot. File Sur-Reply 2, ECF No. 186. Defendant also files a Sur-Reply. Def.’s Sur-Reply, ECF No. 187.

“[W]here new evidence is presented in a reply to a motion for summary judgment, the district court should not consider the new evidence without giving the non-movant an opportunity to respond.” *Provenz v. Miller*, 102 F.3d 1478, 1483 (9th Cir. 1996); *see also, e.g., Or. Nautil Desert Ass’n v. Cain*, 17 F. Supp. 3d 1037, 1048 (D. Or. 2014) (granting motion for leave to file sur-reply, as “[w]hen a party has... presented new evidence in a reply to an opposition, the court may permit the other party to counter the new arguments or evidence”) (citation omitted).

Having reviewed the record, the Court finds that Dr. Engels' declaration is not new evidence. The Court overrules Defendant's objection to Dr. Engels' declaration. Nevertheless, for purposes of summary judgment, the Court grants Defendant's Motion for Leave to File Sur-Reply (ECF No. 186) and will consider Plaintiff's Sur-Reply (ECF Nos. 186-1, 187).

II. Defendant's Alternative Motion for Summary Judgment of Invalidity (ECF No. 169)

In its Motion for Summary Judgment of Non-Infringement, Defendant makes the alternative Motion for Summary Judgment of Invalidity under both 35 U.S.C. § 103 (non-obviousness) and 35 U.S.C. § 101 (subject matter) patentability. Def.'s Mot. Summ. J. 12-21, ECF No. 169. Because invalidity is a complete defense to patent infringement, the Court first addresses the patent validity issue. *See Radio Sys. Corp. v. Lalor*, 709 F.3d 1124, 1132 (Fed. Cir. 2013) ("invalidity operates as a complete defense to infringement").

A patent is presumed valid. *See, e.g.*, 35 U.S.C. § 282 ("A patent shall be presumed valid"); *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1303 (Fed. Cir. 2008). The party challenging the validity of a patent bears the burden of proving by clear and convincing evidence that the patent is invalid. *University of Rochester v. G.D. Searle & Co.*, 358 F.3d 916, 920 (Fed.Cir.2004) ("[A] party 'seeking to invalidate a patent at summary judgment must submit ... clear and convincing evidence of invalidity' "); *Geneva Pharmaceuticals, Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1377 (Fed.Cir.2003) ("This court gives due weight to a patent's presumed validity under 35 U.S.C. § 282 (2000), and an accused infringer must show by clear and convincing evidence that a patent is invalid"); *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1124 (Fed.Cir.2000) ("[T]he party asserting invalidity of a patent must prove the disputed facts by clear and convincing evidence"); *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1216 (Fed.Cir.1998) ("Under 35 U.S.C. § 282, a patent is

presumed valid and one challenging its validity bears the burden of proving invalidity by clear and convincing evidence”). “[A] patentee has the burden of going forward with rebuttal evidence once a challenger has presented a prima facie case of invalidity.” *Mas–Hamilton Group*, 156 F.3d at 1216. If rebuttal is offered, “the presumption of validity remains intact and the ultimate burden of proving invalidity remains with the challenger throughout the litigation.” *Id.*

A. Obviousness Under 35 U.S.C. § 103

Defendant asserts that the tags printed with Paxar Corp.’s Secure Batch ID (“Paxar Art”) are prior art to the ‘967 Patent and render the ‘967 Patent invalid because of obviousness under 35 U.S.C. § 103. Def.’s Mot. Summ. J. 12-14, ECF No. 169.

Section 103(a) forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” The United States Supreme Court set out a framework for applying the statutory language of section 103. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 15-18, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966). The legal determination of obviousness is based on factual inquiries:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

Id. at 17-18.

For a patented invention to be invalid as obvious, the accused infringer must identify prior art references that alone or in combination with other references would have rendered the

claimed invention obvious to one of ordinary skill in the art at the time of the invention. *See e.g., Hitkansut LLC v. United States*, 130 Fed. Cl. 353, 369 (2017). “When an obviousness determination relies on the combination of two or more references, there must be some suggestion or motivation to combine the references.” *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1355 (Fed.Cir.1999). While it is a question of law to determine whether the claimed combination would have been obvious to one with ordinary skills in the art, it is an issue of fact to determine whether such an artisan would have been motivated to combine. *Arctic Cat Inc. v. Bombardier Recreational Prod. Inc.*, 876 F.3d 1350 (Fed. Cir. 2017). It is possible that a reason or motivation may exist, but nonetheless the ordinary artisan would not have found the combination obvious. *Id.*

The Supreme Court warned against hindsight bias in finding obviousness:

A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. *See Graham*, 383 U.S., at 36, 86 S.Ct. 684 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “ ‘guard against slipping into use of hindsight’ ” (quoting *Monroe Auto Equip. Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (C.A.6 1964))).

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 421, 127 S. Ct. 1727, 1742, 167 L. Ed. 2d 705 (2007); *see also, Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1368 (Fed. Cir. 2013) (the Federal Circuit has observed that “the prejudice of hindsight bias” often overlooks that the “genius of invention is often a combination of known elements which in hindsight seems preordained.”); *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1373-74 (Fed.Cir.2008) (cautioning against “the pitfalls of hindsight that belie a determination of obviousness.”); *Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1371-72 (Fed. Cir. 2000) (“...the best defense against hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references.

Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight.”).

The parties’ dispute is over motivation to combine. Def.’s Mot. Summ. J. 14, ECF No. 169; Pl.’s Resp. 18-25, ECF No. 172. Defendant contends that motivation to combine is readily apparent. Def.’s Mot. Summ. J. 14, ECF No. 169. In particular, Defendant argues: “[m]arket forces in the form of customer requests provide a motivation to sell RFID transponders encoded with EPCs that complied with the SGTIN-96 data standard.” *Id.* (citing Kuhno Dep. 64:1-5 (stating that customers ask for “RFID tags that conform to the global standards.”), ECF No. 170-3). Defendant also argues that “[t]he motivation to use the Secure Batch ID system to create serial numbers for those transponders is found in the background knowledge and common sense of those of ordinary skill in the art.” *Id.* at 15 (citing Blanchard Report, ECF No. 170-7). Defendant adds that its offer for sale of RFID transponders encoded with serial numbers generated using Secure Batch ID is evidence that people skilled in the art were interested in using Secure Batch ID to serialize RFID transponders and had a reasonable expectation of success. *Id.*

Contrary to Defendant’s assertion of motivation to combine, Mr. Kuhno testified that Defendant’s customers do not specify or care how serialization is used in the RFID tags. Kuhno Dep. 64:10-11, 166:15-20, ECF No. 173-12. Dr. Engels testified that the SGTIN-96 standard does not address serialization schemas. Engels’ Decl. ¶ 59, ECF No. 174. More importantly, according to Dr. Engels’ testimony, it is technically impractical and impossible to combine the prior art references as Defendant suggests. *Id.* ¶ 61. Dr. Engels explains:

Notably, Avery’s PCID serialization system contemplated use of a 17-digit decimal data string, As shown in the LeSportSac encoding bit map, ... Avery opted to encode this data as 17 separate characters which were individually converted to binary with each character taking up 4-bits of memory space within

the LeSportSac RFID tag memory. This encoded data therefore occupied 68-bits of memory space. The remaining 28-bits of memory in these tags was filled with zeroes to pad the encoded PCID encoded data and fill out the entire 96-bits of memory within the LeSportSac RFID tag memory. Because the serial number portion of this encoding occupies 68-bits of space while leaving only 28-bits for all other data, it is unworkable with the SGTIN-96 format. The SGTIN-96 format allots only the final 38-bits of memory space within the 96-bits of an RFID tag for encoding a serial number and reserves the leading 58-bits of memory for encoding a partition, filter, company prefix, and/or an item reference value. As such, significant modification to the PCID format would be absolutely required to render it usable at all within any SGTIN-96 format.

Id.

Acknowledging that Defendant could have alternatively opted to treat the values comprising its 17-digit PCID as a single, 17-digit value rather than as 17-distinct values for encoding, Dr. Engels discussed why it would still not render the PCID serialization system usable within any SGTIN-96 format. *Id.* ¶ 62.

First, this large decimal value would take up at least 54-bits of memory space when converted to binary – far more than the 38-bits permitted under the SGTIN-96 formats.

And second, concatenation of separate strings of data to create one combined decimal value in this manner completely destroys any possibility that the 5-digit PCID portion can function as MSBs uniquely corresponding to an allocated block of serial numbers. Decimal values within the range of 0 to 99,999,999,999,999,999 (17 – 9’s) would not all have even one common leading bit when converted to binary for encoding. Indeed, implementing PCID serialization in this manner is simply the prior art methodology of “counting up” without any regard for use of MSBs or maintaining clean bit boundaries.

Id. ¶ 63.

Defendant rebuts that shortening a number field must have been obvious to a person having ordinary skill in the art, because Dr. Engels, one skilled in the art, “is more than capable

of shortening number fields.” Def.’s Reply 20, ECF No. 182³. However, Defendant’s argument is speculative because it offers no evidence to support its argument. *See id.*

The Federal Circuit has held that a jury cannot reasonably find the motivation to support obviousness based solely on testimony that “is generic and bears no relation to any specific combination of prior art elements,” and “fails to explain why a person of ordinary skill in the art would have combined elements from specific references in the way the claimed invention does.” *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (affirming pre-verdict judgment as a matter of law). The court must distinguish between “knowledge of a problem and motivation to solve it” and the requisite “motivation to combine particular references to reach the particular claimed method.” *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1373 (Fed. Cir. 2008). Combinations on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated teaching, suggestion, or motivation with some rational underpinning to support the legal conclusion of obviousness. *TQ Delta, LLC v. Cisco Sys.*, 942 F.3d 1352, 1359 (Fed. Cir. 2019); *Microsoft Corp. v. Enfish, LLC*, 662 F. App’x 981, 989 (Fed. Cir. 2016).

Defendant’s arguments are devoid of any reason for a skilled artisan to be motivated to combine. Specifically, Defendant fails to explain why the Paxar Art and other prior art references would have prompted one with ordinary skill in the art to combine the elements in the fashion claimed by the ‘967 Patent and how it is possible to combine. Defendant’s arguments are mere

³ Defendant also argues that it must have been obvious because the 2008 Application, to which the ‘967 Patent claims priority, “contains no discussion of how to fit a limited number of most significant bits and an incrementing serial number within a 38-bit serial number space.” Def.’s Reply 20, ECF No. 182. Defendant has previously challenged the 2008 Application priority. Def.’s Mot. Summ. J., ECF No. 122. The Court discussed this issue in length and found that Defendant failed to meet its burden to show by clear and convincing evidence that the ‘967 Patent is not entitled to the priority date of 2008 Application. Op. and Order 6-16, ECF No. 167. The Court will not address the priority argument here.

conclusory statements. *See McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52 (Fed. Cir. 2001) (“the factual inquiry whether to combine references must be thorough and searching.”); *see also, In re Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002) (stressing that the “need for specificity pervades [obviousness] authority”).

In light of the dispute over the factual inquiry of motivation to combine, summary judgment of obviousness based on the Paxar Art is improper. The Court need not reach other arguments raised by the parties concerning the ultimate legal determination of obviousness. Defendant’s Alternative Motion for Summary Judgment of Invalidity based on 35 U.S.C. § 103 is DENIED.

B. Subject Matter Under 35 U.S.C § 101

Defendant challenges the patentability of the ‘967 Patent because its claims were directed to the abstract idea of partitioning a number space in the content of an RIFD transponder. Def.’s Mot. Summ. J. 19, ECF No. 169.

Section 101 of the patent law defines patentable subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court has “long held that this provision contains an important exception: laws of nature, natural phenomena, and abstract idea are not patentable.”

Alice Corp. Pty. Ltd. v. CLS Bank Int’l, 573 U.S. 208, 216 (2014) (citation omitted).

Acknowledging that “all inventions ... embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas[,]” the Supreme Court noted that “an invention is not rendered ineligible for patent simply because it involves an abstract concept.” *Id.* at 217. The Supreme Court “tread[ed] carefully in construing this exclusionary principle lest it swallow all of patent law.” *Id.*

To distinguish abstract ideas from patent-eligible concepts, the Supreme Court set forth a two-step test. *Id.* at 217-18. The first step is to determine whether the claims at issue are directed to an abstract idea. *Id.* at 217. If the claims are directed to an abstract idea, the inquiry moves to step two to decide whether there are any additional elements to “transform the nature of the claim” into a patent-eligible application. *Id.* That is, whether there is an inventive concept – an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the abstract idea itself. *Id.* at 217-18.

Defendant contends that the ‘967 Patent claims fail the first step of the *Alice* test, reasoning:

If the claim language *itself* does not require a limited number of most significant bits to be assigned to an allocated block of serial numbers in binary, then the claimed invention is not directed to a hardware-based approach accomplished by managing assignment of serial numbers at the binary bit level.

Def.’s Mot. Summ. J. 19-20, ECF No. 169 (emphasis added). Defendant explains: “in order for these aspects of the invention to establish that the claims are directed toward a technological improvement and not an abstract idea, they must be reflected in the claim language *itself*.” Def.’s Mot. Summ. J. 20, ECF No. 169 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016)) (emphasis added).

First, Defendant’s interpretation of the law is misguided. It is established in patent law that claims must be read in light of the specification. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370, 116 S. Ct. 1384, 134 L. Ed. 2d 577 (1996) (“To ascertain the meaning of claims, we consider three sources: The claims, the specification, and the prosecution history.”). In *Enfish*, while the court found that the claims themselves “are specifically directed to a *self-referential* table for a computer database[,]” the court also examined the specification in addition to examining the claim language. *Enfish*, 822 F.3d at

1337. Based on its review of both the claim language and the specification, the *Enfish* court found that the claims were valid under 35 U.S.C. § 101. *Id.* Therefore, Defendant’s position to *only* look at the claim language *itself* to decide whether the claims are directed to an abstract idea does not comport with the law. Thus, Defendant’s challenge that is solely based on the claim language *itself* is unavailing.

Second, Dr. Engels testified that the claims encompass binary encoding:

While the particular sequence of most significant bits representing the PCTag ID may be alternatively expressed in accordance with any number system (binary, decimal, hexadecimal), it is designed as and encoded as a binary sequence set apart from the other data fields within the encoded memory of the infringing RFID tags with the intentional maintenance of clean, consistent bit boundaries in the assigned values.

Engels Decl. ¶ 9, ECF No. 174. Defendant’s argument without evidence showing the contrary is unavailing.

Defendant further argues, without citing any evidence, that “if the claims encompass commissioning authority,” “then [they] are not directed to a means of enabling quasi-autonomous commissioning, as commissioning authority does not enable quasi-autonomous commissioning.” Def.’s Mot. Summ. J. 20, ECF No. 169. However, the specification of the ‘967 Patent expressly teaches that the claims may effect quasi-autonomous encoding operations:

Quasi-autonomous RFID transponder encoding authority is achieved when an external number issuance authority allocates to the encoder blocks of numbers for specific object class. A preferred embodiment for quasi-autonomous transponder encoding authority is realized when large pre-authorized blocks of serial numbers are made available to encoder 175 or 30 to utilize on object classes as objects of a class are presented for tagging. A preferred method of providing pre-authorized blocks of object class serial number space into sectors that are defined by a limited number of MSB’s (Most Significant Bits) of the serial number field.

Wojcio Decl., Ex. B, the ‘967 Patent, 8:4-15, ECF No. 173-2; *see also*, Wojcio Decl., Ex. B, 8:21-32, 33:20-23, ECF No. 173-2.

Additionally, in contrast to Defendant’s unsupported assertion that the claims “broadly encompass virtually any use of segmented serial numbers in RFID transponders[,]” Dr. Engels testified that claims 1 and 13 of the ‘967 Patent are directed to an encoded RFID transponder implemented with a memory structure accommodating a specific hardware-based number scheme. Def.’s Mot. Summ. J. 20, ECF No. 169; Engels’ Decl. ¶ 90, ECF No. 174. The Court therefore finds that Defendant has failed to carry its burden to show by clear and convincing evidence that the ‘967 Patent claims are directed to an abstract idea.

For these reasons, Defendant’s Alternative Motion for Summary Judgment of Invalidity under 35 U.S.C. § 101 is also DENIED.

III. Plaintiff’s Motion for Partial Summary Judgment (ECF No. 168)

A. Summary Judgment Against Defendant’s Remaining Affirmative Defenses

The Court begins with the second part of Plaintiff’s motion concerning patent validity before discussing the first part regarding infringement. *See Radio Sys. Corp. v. Lalor*, 709 F.3d 1124, 1132 (Fed. Cir. 2013) (“invalidity operates as a complete defense to infringement”). The second part of Plaintiff’s motion is against Defendant’s affirmative defenses of invalidity and inequitable conduct. Pl.’s Mot. Summ. J. , ECF No. 168.

a. Inequitable Conduct Affirmative Defense

Defendant concedes that its inequitable conduct affirmative defense is not viable under the Court’s prior ruling of priority. Def.’s Resp. 24, ECF No. 175. The Court grants Plaintiff’s Motion for Summary Judgment as to Defendant’s affirmative defense of inequitable conduct.

b. Invalidity Affirmative Defense

On Plaintiff’s motion for summary judgment against Defendant’s invalidity affirmative defense, Defendant concedes that the references post-dating the 2008 Application are not

statutory prior art based on this Court’s prior ruling that the ‘967 Patent is entitled to the priority date of the 2008 Application. Def.’s Resp. 23, ECF No. 175; Op. and Order 6-16, ECF No. 167. The Court grants Plaintiff’s motion against the invalidity affirmative defense based on prior art references post-dating the 2008 Application.

However, Defendant maintains its invalidity affirmative defense based on U.S. Patent No. 8,857,221 (“the ‘221 Patent” or “Kuhno Patent”) and the *RFID for Dummies* book. *Id.* at 3-16. Defendant asserts that both references anticipate the ‘967 Patent and *RFID for Dummies* also renders the ‘967 Patent obvious. *Id.*

Anticipation is a question of fact. *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015). Anticipation under 35 U.S.C. § 102(b) requires a showing that each limitation of a claim is found in a single reference. *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1380 (Fed. Cir. 2001). To anticipate a patent, the reference must enable one of ordinary skill in the art to make the invention without undue experimentation. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009).

Obviousness under 35 U.S.C. § 103 is an issue of law based on the underlying findings of facts including the scope and content of the prior art, the differences between the prior art and the claims, the level of ordinary skill in the art and secondary considerations. *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015); *supra*, Discussion II.A. Before the court makes the ultimate legal determination of obviousness, every claim limitation of the invention must be found in the prior art references. *See Velander v. Garner*, 348 F.3d 1359, 1363 (Fed.Cir.2003).

Thus, both anticipation and obviousness depend on the factual inquiry of whether a prior art reference discloses every claim limitation. Plaintiff argues that neither the ‘221 Patent nor

RFID for Dummies teaches certain elements of the ‘967 Patent. Pl.’s Mot. Summ. J. 27, 29, ECF No. 168. Defendant asserts the opposite, citing the conflicting testimony of Mr. Sweeney as grounds to deny summary judgment. *Id.* at 3, 11 (citing Sweeney Report ¶¶ 88-92, ECF No. 168-17).

The following discussion uses claim 1, a representative independent claim of the disputed claim elements:⁴

Claim Element	Claim 1
Preamble:	1. An RFID transponder comprising:
Element A:	a substrate;
Element B:	an antenna structure formed on the substrate; and
Element C:	an RFID integrated circuit chip which is electrically coupled to the antenna structure,
Element D:	wherein the RFID integrated circuit chip is encoded with a unique object number, the unique object number comprising an object class information space and a unique serial number space,
Element E:	wherein the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits,
Element F:	wherein the unique serial number space comprises the limited number of most significant bits <i>uniquely corresponding</i> to the limited number of most significant bits of the allocated block and of <i>remaining bits of lesser significance</i> that together comprise the one serial number instance.

Am. Compl., Ex. A, the ‘967 Patent Reexam. Cert., 1:21-39, ECF No. 71-1.

i. The ‘221 Patent (Kuhno Patent)

Plaintiff takes the position that it is undisputed that the ‘221 Patent fails to disclose at least Elements D-F of independent claims 1 and 13 and therefore cannot anticipate either claims 1 or 13. Pl.’s Mot. Summ. J. 28, ECF No. 168 (citing Engels’ Decl. ¶¶ 161-68, ECF No. 168-11).

⁴ Independent claim 13 also includes these elements, as well as their respective dependent claims. *See* Am. Compl., Ex. A, the ‘967 Patent Reexam. Cert., 2:1-18, ECF No. 71-1.

Plaintiff argues that: (1) the ‘221 Patent does not teach or suggest encoding an RFID tag with object class information and with a serial number instance comprising a limited number of MSBs along with remaining bits of lesser significance, and (2) a person of ordinary skill would not understand that the ‘221 teaches or suggests the specific data structures claimed by the ‘967 Patent. *Id.* at 28-29 (citing Engels’ Decl. ¶¶ 161-68, ECF No. 168-11).

More specifically, Kuhno does not teach or suggest “wherein the RFID integrated circuit chip is encoded with a unique object number, the unique object number comprising an object class information space and a unique serial number space” as required by all of the challenged claims of the ‘967 Patent. Instead, Kuhno is directed to systems for gathering and storing information corresponding to shipping pallets, cartons, and the like. Exh. M at 6:5-11 [ECF No. 168-19]. The systems disclosed scan a printed label on a carton which may contain UPC, SKU, or other indicia, then create or add the information to a database of records corresponding to an identifier number assigned to the pallet or carton. Exh. M at 6:27-7:3 [ECF No. 168-19]. RFID tags are then encoded with information such as a serial number for a carton or pallet and affixed thereto. The RFID tags may be [sic] include additional data, but Kuhno does not disclose any particular format or data structure for such an encoding that may include data beyond a serial number. Exh. M at 5:22-29; 6:27-7:3 [ECF No. 168-19]. In fact, Kuhno states that “[t]he format and configuration of the RFID Printer Data depends on the requirements of the RFID printer and the protocols related to the barcode and RFID tag ***and are therefore not discussed herein.***” Exh. M at 6:66-7:3 [ECF No. 168-19] (emphasis added).

Engels’ Decl. ¶ 162, ECF No. 168-11 (emphasis supplied).

Defendant disagrees and concludes that “Dr. Engels’ testimony accords with Mr. Sweeney’s analysis” based on Dr. Engels’ testimony. Def.’s Resp. 8-9, ECF No. 175 (citing Legaard Decl., Ex. B, 23:17-21, 52:9-13, 76:1-11, ECF No. 176-2; Engels’ Decl. ¶ 165, ECF No. 168-11). However, Defendant offers no evidence that creates a dispute of the fact that “[the ‘221 Patent] does not disclose any particular format or data structure for such an encoding that may include data beyond a serial number.” Engels’ Decl. ¶ 162, ECF No. 168-11. Mr. Sweeney’s opinion does not identify which part of the ‘221 Patent teaches the concept of most significant bits. *See* Sweeney Report ¶¶ 88-92, ECF No. 168-17; *see also*, Sweeney Report ¶¶ 88-92, ECF

No. 189-1. Nor does Mr. Sweeney explain how one skilled in the art would apply the disclosure of the ‘221 Patent to meet all of the claim requirements of the ‘967 Patent. *See id.*

Defendant’s argument and Mr. Sweeney’s opinion are not sufficient to establish a genuine issue of material fact. *See Dynacore Holdings Corp. v. U.S. Phillips Corp.*, 363 F.3d 1263, 1278 (Fed. Cir. 2004) (district court did not err in ruling conclusory testimony did not create a material factual dispute for trial) (collecting authority); *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1329 (Fed. Cir. 2001) (“Broad conclusory statements offered by [] experts are not evidence and are not sufficient to establish a genuine issue of material fact.”). The Court grants Plaintiff’s Motion for Summary Judgment against Defendant’s invalidity affirmative defense based on the 221 Patent.

ii. RFID for Dummies

Plaintiff contends that *RFID for Dummies* does not disclose, teach or suggest the use of the data structure utilizing most significant bits defining allocated blocks of serial numbers. Pl.’s Mot. Summ. J. 30 (citing Engels’ Decl. ¶¶ 153-54, ECF No. 168-11). Dr. Engels explains:

154. *RFID for Dummies* discloses an approach to allocating serial numbers in which a range of decimal serial numbers for each product is allocated to each manufacturing facility. Within a facility, a range of decimal numbers from those allocated to the facility is allocated to each production line producing a particular product. However, this is merely selecting a range of decimal numbers in a database and assigning those decimal numbers to a facility or a production line within a facility. This was a conventional methodology employed at the time for sequential allocation of batches of serial numbers from a central allocation authority. *RFID for Dummies* makes no mention of using most significant bits to allocate a block of serial numbers.

155. Selecting and assigning a range of a series of decimal numbers is not the same and in no way discloses or suggests assigning an allocated block based on a limited number of most significant bits. In *RFID for Dummies*, the decimal serial number would be converted from decimal to binary for encoding on an RFID tag. The only consideration of the binary numbers is the conversion from the decimal representation. There is no disclosure of defining or allocating block based on a limited number of most significant bits.

Engels’ Decl. ¶¶ 154-55, ECF No. 168-11.

As it argues for the ‘221 Patent, Defendant relies on Mr. Sweeney’s conclusory testimony that *RFID for Dummies* anticipates the ‘967 Patent and renders the ‘967 Patent obvious. Def.’s Resp. 11-12, ECF No. 175 (citing Sweeney Report ¶ 90, ECF No. 168-17); *see also*, Sweeney Report ¶ 90, ECF No. 189-1. For the same reasons as discussed above under the ‘221 Patent, the Court finds that Defendant’s argument and Mr. Sweeney’s report are insufficient to establish a dispute of a material fact.

Defendant further contends that Plaintiff’s previous witness Mr. Williams⁵ “testified to the contrary[.]” Def.’s Resp. 13, ECF No. 175. Mr. Williams testified that *RFID for Dummies* “talk[s] about partitioning the serial number bits into those distinct fields [of facility number, line numbers and sub-sub serial numbers.]” Williams Dep. 97:24-98:3, ECF No. 176-4. Mr. Williams further testified that the facility number would be a series of bits and would be at the beginning of the serial number space; that the numbers assigned to that facility were an allocated block of serial numbers; that every number in that allocated block would begin with the same facility number; and that the serial number bits would uniquely correspond to that facility number. *Id.* at 98:4-10, 98:12-23. Defendant suggests that Mr. Williams’ testimony supports Mr. Sweeney’s opinion regarding the teachings of *RFID for Dummies*.

However, Plaintiff points out that Mr. Williams expressly distinguished the methodology of *RFID for Dummies* from an embodiment of the use of most significant bits, one of the central inventive features of the ‘967 Patent. Pl.’s Reply 11, ECF No. 179. Mr. Williams testified that *RFID for Dummies* does not state the use of most significant bits. Williams Dep. 93:23-25, ECF

⁵ Plaintiff disputes Defendant’s reference of Mr. Williams as Plaintiff’s expert witness. Def.’s Resp. 13, ECF No. 175; Pl.’s Reply 11, ECF No. 179. Plaintiff states that Mr. Williams is a fact witness. Pl.’s Reply 11, ECF No. 179.

No. 180-1. He also testified that *RFID for Dummies* does not mention anything about bits of a serial number, nor could there be a conclusion from reading *RFID for Dummies* that using most significant bits of the serial number could be accomplished. *Id.* at 94:9-16.

Despite Defendant's assertion that Mr. Williams' testimony supports Mr. Sweeney's opinion, Defendant has not provided any evidence to dispute the fact that *RFID for Dummies* does not disclose, teach or suggest the use of most significant bits, as testified both by Mr. Williams and Dr. Engels. *Id.*; Engels Decl. ¶¶ 153-56, ECF No. 168-11. Therefore, the Court grants Plaintiff's Motion for Summary Judgment against Defendant's invalidity affirmative defense based on *RFID for Dummies*.

B. Partial Summary Judgment of Infringement

Plaintiff moves for partial summary judgment of infringement under 35 U.S.C. §§ 271(a), (b), and (f). Pl.'s Mot. Summ. J. 10-24, ECF No. 168.

To prove infringement, the patentee must show that the accused device meets each claim limitation either literally or under the doctrine of equivalents. Literal infringement requires the patentee to prove that the accused device contains each limitation of the asserted claim. Infringement under the doctrine of equivalents requires the patentee to prove that the accused device contains an equivalent for each limitation not literally satisfied.

Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 812 (Fed. Cir. 2002) (citations omitted). "A determination of infringement, whether literal or under the doctrine of equivalents, is a question of fact." *Id.* (citation omitted).

Plaintiff asserts that the undisputed evidence shows that Defendant's RFID tags meet every claim limitation of the '967 Patent. Pl.'s Mot. Summ. 8, ECF No. 168. For the ease of discussion, the Court reproduces independent claims 1 and 13:

Claim Element	Claim 1
Preamble:	1. An RFID transponder comprising:
Element A:	a substrate;
Element B:	an antenna structure formed on the substrate; and
Element C:	an RFID integrated circuit chip which is electrically coupled to the antenna structure,
Element D:	wherein the RFID integrated circuit chip is encoded with a unique object number, the unique object number comprising an object class information space and a unique serial number space,
Element E:	wherein the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits,
Element F:	wherein the unique serial number space comprises the limited number of most significant bits uniquely corresponding to the limited number of most significant bits of the allocated block and of remaining bits of lesser significance that together comprise the one serial number instance.

Claim Element	Claim 13
Preamble:	1. An RFID transponder comprising:
Element A:	a substrate;
Element B:	an antenna structure formed on the substrate; and
Element C:	an RFID integrated circuit chip which is electrically coupled to the antenna structure,
Element D:	wherein the RFID integrated circuit chip is encoded with a global trade item number including a unique object number, the unique object number comprising an object class information space including a block of at least 50 bits and a unique serial number space including a block of at least 38 bits,
Element E:	wherein the unique serial number space has one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits, and
Element F:	wherein the unique serial number space comprises at least 3 most significant bits uniquely corresponding to the limited number of most significant bits of the allocated block.

Am. Compl., Ex. A, the '967 Patent Reexam. Cert., 1:21-39, 2:1-18, ECF No. 71-1.

Defendant's opposing arguments do not concern the preamble and elements A, B, and C of the two independent claims. Def.'s Resp. 16-19, ECF No. 175. It is therefore undisputed that

Defendant's products meet the limitations of the preamble, elements A, B, and C. *See United States v. McEnry*, 659 F.3d 893, 902 (9th Cir. 2011) (where an argument is available but not raised, it is waived); *Hanse v. Long*, 2014 WL 3435871, *14 (C.D.Cal. Jan. 28, 2014), *adopted* 2014 WL 3436156 (C.D.Cal. July 10, 2014) (failure to address argument in reply is a concession of the argument). Thus, the Court's discussion will only concern elements D, E and F.

Additionally, Defendant does not dispute that the difference between claim 1 and claim 13 has no effect on the infringement analysis of these claims. Def.'s Resp. 16-19, ECF No. 175; *see* Pl.'s Mot. Summ. 10-19, ECF No. 168.

a. Infringement Under 35 U.S.C. § 271(a)

Under 35 U.S.C. § 271(a), "whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent."

As an initial matter, one argument Defendant makes in opposition is that the serial numbers of its products are assigned in decimal and therefore cannot infringe the '967 Patent claims which require most significant bits and the assignment of serial numbers to be in binary. Def.'s Resp. 16-19, ECF No. 175. This Court previously held that "it is irrelevant whether the numbers in decimal form in the data files were copied into binary form." Op. and Order 9, ECF No. 165. Similarly, here, because a fully encoded RFID tag can only physically be encoded in binary, Defendant's argument that its serial numbers are assigned in decimal is irrelevant. *See* Engels Decl. ¶¶ 7-9, ECF No. 180-4; Engels Decl. ¶¶ 100-05, ECF No. 168-11; Def.'s Mot. J. 6, ECF No. 115 (citing Answer ¶ 42, ECF No. 114) (binary form is required to encode the numbers onto RFID tags).

i. Element D

In both claim 1 and claim 13, element D requires that “the RFID integrated circuit chip is encoded with a unique object number, the unique object number comprising an object class information space and a unique serial number space,” with claim 13 additionally requiring that the encoding comprise a “global trade item number” with at least 50 bits comprising an object class information space and at least 38 bits comprising a unique serial number space. Am. Compl., Ex. A, the ‘967 Patent Reexam. Cert., 1:21-39, 2:1-18, ECF No. 71-1.

Based on Defendant’s internal documents, Dr. Engels identified two categories of schemas Defendant uses to encode the accused RFID tags: “Commissioning Authority / PCTag Schemas” and “Commissioning Authority Schemas.” Engels’ Decl. ¶¶ 23-32, ECF No. 168-11; Pl.’s Mot. Summ. J., Ex. H2, 1, ECF No. 168-13; Ex. J, 96, ECF No. 168-16. Based on his analysis of the format of Defendant’s accused RFID tags and these schemas used to encode data, Dr. Engels testified that Defendant’s RFID tags encoded pursuant to either of the two schemas literally infringe element D of claims 1 and claims 13. *Id.* ¶¶ 71-88, 140.

Defendant does not dispute Dr. Engel’s analysis. *See* Def.’s Resp. 19-21, ECF No. 175. However, Defendant argues that it “re-uses serial numbers for different retail brand owners.” Def.’s Resp. 20-21, ECF No. 175 (citing Blanchard Report ¶¶ 83-85, ECF No. 170-7). Because of the “re-use,” Defendant argues that Plaintiff cannot establish that any serial number encoded by Defendant is unique. *Id.* at 21. Plaintiff rebuts that Defendant’s argument “divorces the phrase ‘unique serial number space’ from the remainder of element D and element E and warps the plain language of the claim.” Pl.’s Reply 14, ECF No. 179.

At claim construction, this Court construed “unique serial number space” as “data field within the memory of the RFID integrated circuit for information identifying a unique serial

number.” Op. and Order 3, ECF No. 68. This claim construction does not require a single worldwide use of any “one serial number instance” as Defendant suggests. Nor does the claim language have this requirement. *See, e.g.*, Am. Compl., Ex. A, the ‘967 Patent, 35:41-42, ECF No. 71-1 (“RFID Transponder **156** receives and stores a globally unique identifier such as an SGTIN-96 ...”).

Consistent with the Court’s construction, Dr. Engels testified: “[Element D] entails that a ‘unique object number’ encoded within the RFID integrated circuit chip contains and includes two subparts: 1) an ‘object class information space’ and 2) a ‘unique serial number space.’” Engels’ Decl. ¶ 73, ECD No. 168-11. Additionally, “[w]hen this system is applied globally across all of the object classes, each object class will have its own set of serial numbers such that the *combination* of the object class and serial number is *globally unique*.” *Id.* ¶ 115 (emphasis added).

Dr. Engels explains why Defendant’s “re-use” argument fails:

Because each brand owner and each item produced or sold by each brand owner correspond to different object class information (e.g., company prefix, item reference code), the further requirement that a particular serialized data string can only be used once across all brands and products worldwide is nonsensical and unduly and dramatically narrows the available universe of “unique object numbers.” Such a system would also obviate any need to include object class information within the encoded data of an EPC, since the relative few available serial numbers could only be used once globally and are therefore by themselves sufficient for unique object identification. This is not what the ‘967 Patent teaches or claims, however, as the claims plainly do not include this additional, negative limitation.

Engels’ Decl. ¶ 17, ECF No. ECF No. 180-4.⁶

⁶ Defendant’s objection to Dr. Engels’ declaration in support of Plaintiff’s Reply does not include ¶ 17. Def.’s Mot. Leave File Sur-Reply, Ex. A, 2, ECF No. 186-1.

Because Defendant’s “re-use” argument fails to materially dispute Plaintiff’s evidence that Defendant’s accused RFID tags meet element D, summary judgment for Plaintiff is proper as to element D.

ii. Element E

Element E⁷ requires that “the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits.” Am. Compl., Ex. A, the ‘967 Patent Reexam. Cert., 1:21-39, 2:1-18, ECF No. 71-1.

Based on his analysis of Defendant’s schemas encoding the RFID tags, Dr. Engels testified that the accused RFID tags literally infringe element E of claims 1 and 13. Engels’ Decl. ¶¶ 100-05, ECF No. 168-11. On Plaintiff’s motion for summary judgment as to the infringement of element E, Defendant does not dispute or contradict Plaintiff’s proffered expert testimony and documents. *See* Def.’s Resp. 19-21, ECF No. 175. Rather, Defendant asserts that Plaintiff has failed to establish that Defendant’s “PC Tag numbers or Commissioning Authority numbers are ever assigned to an *allocated* block of serial numbers.” Def.’s Resp. 19, ECF No. 175 (emphasis in original).

Defendant offers no evidence to support its suggestion that the claims require PC Tag numbers or Commissioning Authority numbers be “assigned” to an allocated block of serial numbers.⁸ Element E requires the allocated block be assigned a limited number of most

⁷ The minor difference between claim 1 and claim 13 does not impact the infringement analysis. Pl.’s Reply 15, n. 11, ECF No. 179.

⁸ Defendant cites the Court’s claim construction that “an allocated block of serial numbers” means “a pre-authorized serial numbers.” Def.’s Resp. 20, ECF No. 175. However, Defendant does not explain how this claim construction supports its assertion of the claim limitation that PC Tag numbers and Commissioning Authority numbers are assigned to an allocated block of serial numbers. *Id.* at 20. The Court finds no relevancy between Defendant’s argument and this claim construction.

significant bits. Am. Compl., Ex. A, the ‘967 Patent Reexam. Cert., 1:21-39, 2:1-18, ECF No. 71-1. Dr. Engels testified that the ‘967 Patent discloses that “a block of serial numbers is *created* ...” and “a serial number instance is *selected* from this block of serial numbers ...” Engels’ Decl. ¶ 114, ECF No. 168-11 (emphasis added).

Defendant has offered no evidence to dispute Plaintiff’s evidence regarding the infringement of element E. The Court therefore finds summary judgment is proper as to infringement of element E.

iii. Element F

Element F of claim 1 requires that “the unique serial number space comprises the limited number of most significant bits uniquely corresponding to the limited number of most significant bits of the allocated block and of remaining bits of lesser significance that together comprise the one serial number instance.” Am. Compl., Ex. A, the ‘967 Patent Reexam. Cert., 1:21-39, ECF No. 71-1. Element F of claim 13 adds the additional limitation that the most significant bits comprise at least three bits⁹. *Id.* at 2:1-18.

Plaintiff’s summary judgment as to infringement of element F is supported by Dr. Engels’ testimony and analysis that element F is present in Defendant’s products. Engels’ Decl. ¶¶ 109-22, ECF No. 168-11. Defendant opposes and argues that commissioning authority does not “uniquely correspond” to any one allocated block because “commissioning authority numbers ... are not assigned to an allocated block, but rather are assigned to many allocated blocks.” Def.’s Resp. 20, ECF No. 175 (citing Sweeney Report ¶¶ 114-18, ECF No. 168-17; Blanchard Report ¶¶ 70-78, ECF No. 170-7; Blanchard Decl. ¶¶ 10-12, ECF No. 171).

⁹ Plaintiff notes that it does not allege infringement by RFID tags encoded pursuant to Commissioning Authority only schema comprising only two bits. Pl.’s Reply 17, n. 12, ECF No. 179.

Defendant contends that Dr. Engels provides no explanation for how any accused transponder satisfies the “uniquely corresponding” requirement. *Id.*

As discussed above, Dr. Engels identified two categories of infringing schemas: Commissioning Authority / PCTag Schemas and Commissioning Authority Schemas. Engels’ Decl. ¶¶ 23-32, ECF No. 168-11; Pl.’s Mot. Summ. J., Ex. H2, 1, ECF No. 168-13; Ex. J, 96, ECF No. 168-16. Defendant’s response only challenges the Commissioning Authority Schemas but not the Commissioning Authority / PCTag Schemas. Therefore, it is undisputed that the Commissioning Authority / PCTag Schemas or RFID tags encoded by such schemas infringe element F.

As to Defendant’s argument about the Commissioning Authority Schemas, Plaintiff notes an inconsistency between Defendant’s argument and its statement that “[c]ommissioning authority numbers are a sequence of bits that are to be used at the beginning of each and every serial number encoded *pursuant to a given schema*.” Pl.’s Reply 18, ECF No. 179 (citing Def.’s Mot. Summ. J. 10, ECF No. 169) (emphasis supplied). Despite this inconsistency between “many” allocated blocks and “a given schema,” Defendant has offered evidence that establishes a factual dispute whether the Commissioning Authority numbers infringe element F.

Thus, to the extent that Plaintiff seeks summary judgment on the infringement of element F by RFID tags encoded by the Commissioning Authority / PCTag Schemas, the Court grants Plaintiff’s motion. However, the Court denies Plaintiff’s summary judgment motion as to infringement of element F by the Commissioning Authority Schemas, because there remains a genuine dispute of material fact of whether RFID tags encoded by the Commissioning Authority Schemas meet element F.

b. Infringement Under 35 U.S.C. § 271(b)

Under 35 U.S.C. § 271(b), “[w]hoever actively induces infringement of a patent shall be liable as an infringer.” “In order to succeed on a claim of inducement, the patentee must show, first that there has been direct infringement, and second that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another’s infringement.” *Enplas Display Device Corp. v. Seoul Semiconductor Co.*, 909 F.3d 398, 407 (Fed. Cir. 2018). “[I]nducement can be found where there is [e]vidence of active steps taken to encourage direct infringement, which can in turn be found in advertising an infringing use or instructing how to engage in an infringing use.” *Barry v. Medtronic, Inc.*, 914 F.3d 1310, 1334 (Fed. Cir. 2019).

As discussed above, the Court grants summary judgment as to Plaintiff’s direct infringement claim under 35 U.S.C. § 271(a) with the exception of RFID tags encoded with the Commissioning Authority Schemas. *Supra*, Discussion III.B.a.iii. Plaintiff further offers evidence that Defendant took active steps by providing instructions to its customers about how to encode RFID tags and labels in accordance with the specifications and schemas that directly infringe the ‘967 Patent. Engels’ Decl. ¶¶ 37, 46-47, ECF No. 168-11; Def.’s Serialization Manager Serial Number Request Instruction, 3-4, 9-16, ECF No. 168-24; Kuhno Dep. 15:12-16:4, 21:7-15, 23:19-24:10, 171:9-172:5, ECF No. 168-9; Pl.’s Mot. Summ. J., Exs. S1-S5, ECF Nos. 168-25 – 168-29.

Other than the arguments made concerning direct infringement under 35 U.S.C. § 271(a), Defendant does not separately dispute any evidence offered by Plaintiff as to induced infringement under 35 U.S.C. § 271(b). *See* Def.’s Resp. 21, ECF No. 175. Therefore, consistent with the granting of Plaintiff’s summary judgment motion of infringement under 35 U.S.C.

§ 271(a), Plaintiff's Motion for Summary Judgment is granted as to infringement under 35 U.S.C. § 271(b).

c. Infringement Under 35 U.S.C. § 271(f)

The relevant portion of 35 U.S.C. § 271(f) provides:

(2) Whoever without authority supplies or causes to be supplied in or from the United States any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside of the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

35 U.S.C. § 271(f)(2).

This Court has previously held that data files supplied by Defendant to foreign manufacturers, who then use the data files to encode onto RFID tags, are “components” under § 271(f)(2). Op. and Order 9, ECF No. 165. Plaintiff provides evidence that Defendant causes complete EPCs to be created in the United States and then supplies them abroad to be encoded onto RFID tags. Pl.'s Mot. Summ. J. 21-22, ECF No. 168.

In response, Defendant distinguishes local serialization programs from the central serialization systems. Def.'s Resp. 21-22, ECF No. 175. “When local serialization programs are used, complete EPCs are not provided[.]” Blanchard Report ¶ 62, ECF No. 170-7. Defendant contends that, because Dr. Engels does not identify which accused transponders are encoded pursuant to central program and which are encoded pursuant to local programs, Plaintiff has not met its burden of proof that Defendant supplied complete EPCs to foreign factories and service bureaus. Def.'s Resp. 22, ECF No. 175.

Mr. Blanchard states in his report that “Central Serialization using PCMate and Serialization Manager is very rare but should be explained. Central Serialization from SM to

PCMate sends the entire EPC number to PCMate (in hexadecimal) for every tag that needs to be commissioned.” Blanchard Report ¶ 62, ECF No. 170-7. Therefore, Mr. Blanchard’s report confirms that, while “very rare,” Defendant’s Central Serialization sends the entire EPC number for every tag that needs to be commissioned. *Id.* Defendant does not offer any evidence to dispute the fact that it uses Central Serialization to provide complete EPCs to foreign manufacturers. Accordingly, summary judgment of infringement under § 271(f) is proper.

IV. Defendant’s Motion for Summary Judgment of Non-Infringement (ECF No. 169)

Defendant’s Motion for Summary Judgment of Non-Infringement generally argues that its transponders do not meet the claim requirements. Def.’s Mot. Summ. J. 8-11, ECF No. 169. Because Plaintiff’s Motion for Partial Summary Judgment of Infringement under 35 U.S.C. §§ 271(a), (b) and (f) is granted, Defendant’s Motion for Summary Judgment of Non-Infringement under 35 U.S.C. §§ 271 (a), (b) and (f) is necessarily DENIED. To the extent Defendant seeks summary judgment of non-infringement under 35 U.S.C. § 271(c), Defendant’s arguments are the same as those discussed above. Because the Court found Defendant’s arguments unavailing, Defendant’s motion as to 35 U.S.C. § 271(c) is DENIED.

CONCLUSION

Both parties’ evidentiary objections are overruled.

Defendant’s Motion to File Sur-Reply is GRANTED (ECF No. 186) is GRANTED.

Defendant’s Alternative Motion for Summary Judgment of Invalidity Under 35 U.S.C. §§ 101 and 103 (ECF No. 169) is DENIED.

Plaintiff’s Motion for Summary Judgment (ECF No. 168) is GRANTED except as to infringement of element F by the Commissioning Authority Schemas, which is DENIED.

Defendant's Motion for Summary Judgment of Non-Infringement (ECF No. 169) is
DENIED.

DATED this 14th day of September 2020.

s/ Mustafa T. Kasubhai
MUSTAFA T. KASUBHAI
United States Magistrate Judge